Part 5 Construction Activities

Part 5A Control of Materials (Standard Specifications 1-06.1)

Prior to use, the Contractor shall notify the Engineer of all proposed materials. The Contractor shall use either the Qualified Product List or the Request for Approval of Material form. *Other agency approved forms require a GSP approved by FHWA revising this specification to be acceptable.*

All material incorporated into the permanent work:

- Shall be new, unless the special provisions permit otherwise;
- Shall meet the requirements of the contract and be approved by the Engineer;
- May be inspected or tested at any time during their preparation and use;
 and
- Shall not be used in the work if they become unfit after being previously approved.

What are my agency's responsibilities?

Your agency is responsible for:

- reviewing and approving all materials used on the project.
- Compiling a documentation package that tells what was used, how much was used, where it came from, where it was used, whether or not it met specifications
- Tracking all material documentation so it can be retrieved at a later date

Record of Materials (ROM)

Record of Materials (ROM) is a list of all materials to be used on your project. It is contract specific and based on the Chapter 9 requirements of the *Construction Manual*, your contract documents and the *Standard Specifications*. You can alter a WSDOT generated ROM to reflect the list of changes allowed by Appendix 52.108 of the *LAG Manual*.

The Inspector should be:

- Familiar with the "Record of Materials"
- Make sure an approved "Request for Approval of Material" or "QPL" is on file prior to using a material
- Understand the difference between material **Approval** and material **Acceptance**.

Material Approval – the process that determines the material submitted is appropriate for the intended use

Material Acceptance – the process that you apply to prove the material meets specifications

Material Tracking (A.K.A. 'Working' ROM)

A material tracking process is **HIGHLY RECOMMENDED** for all projects. You can supply updated copies to the inspectors and contractor on a monthly or weekly basis. They can use it to tell immediately that the material for the order of work they are doing is pre approved or needs to be submitted.

Use the ROM for an easy way to track materials

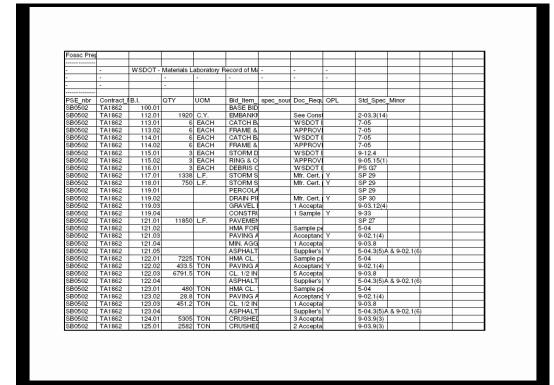
Record of Materials is a tool prepared by WSDOT's Headquarters Materials Lab or your office. It may be downloaded electronically, printed and filled out with a pen or filled out electronically in a spread sheet to keep track of what submittals, certifications, test reports etc. have been received, approved, rejected or accepted.

An agency may develop its own Record of Materials. There are instructions for developing a ROM in the "At a Glance" section of this handout.

Each inspector should be familiar with the requirements listed on the ROM.

A check for a maintained Record of Material or 'Working ROM' will be part of the Documentation and Project Management Reviews.

HMA Acceptance For Local Agencies



To change the ROM as it is delivered to one that you can use start by

- 1. Deleting all columns you don't need
- 2. Add lines between Bid Items so you have a place to record documentation
- 3. Color code requirements and submittals to your liking, whatever works for your office is acceptable as long as it is current.

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For each material used on a construction project a certain number of documents should be submitted, reviewed, approved, filed and copies returned to the contractor.

Material documentation files should include the following documents for HMA RAM, QPL or other Material Approval Document – See examples on pages 20 & 22 of this handout. ASA Approval Report on page 21

An approved Mix Design - Example on pages 5-7 of this handout Delivery Tickets for the HMA no example included PG Binder Bills of Lading (these show the binder used is what was approved and also show the amount of Anti-Strip in the binder in cases where it is added at the refinery) – Example on page 26 of this handout

Test Reports if any testing is done – Examples on pages 12 & 14 of this handout Composite Pay Factor work sheets where applicable – Example on page 18.

25

12.02 Bid Item Quantity Unit Description Documentation Req d Spec 10.201			Record of Material	2/9/7	7/6/2005 08:30:15
New Order Documentation Req d Special Removal of Structures and Obstructures and Obstructures and Obstructures and Obstructures Structures	Contract N	10. TA2812			
1000 S.Y. CONSTRUCTIONS CANALTIC FOR DRAIN About CANALTIC FOR DRAIN CANALTIC FOR DRAIN CANALTIC FOR DRAIN CANALTIC FORD CA	Bid Item	Quantity	Unit	Documentation Req'd	Spec. Ref.
1 Acceptance Sample per 100 Tons 1000 S.Y. CONSTRUCTION GEOTEXTILE FOR PAIN. 1 Acceptance Sample per 100 Tons 1000 S.Y. CONSTRUCTION GEOTEXTILE FOR Adv. 出土 2	012.01		REMOVAL OF STRUCTURES AND OBSTRUCTIONS		SP 70
Not used file Teal # 2	012.02		GRAVEL BACKFILL FOR DRAIN	1 Acceptance Sample per 100 Tons	9-03.12(4)
1000 S.Y. CONSTRUCTION GEOTEXTILE FOR Mit. Car. det 81d. Spec. 1-06.3					
DONE SEPARATION PANN #41 VES PONE	013.01	1000	S.Y. CONSTRUCTION GEOTEXTILE FO		9-33
1300 TON GRAVEL BASE GAM #7 JAcceptance Sample(s) Required 9-03.10			8/2/8	or See Current OPL	
Delignment Del	014.01		TON GRAVEL BASE CONSTITUTION HAPPED		9-03.10
200 TON CRUSHED SURFACING BASE COURSE 2. A, By: Wurth e/z/o5 300 TON ASPHALT CONC. PAVEMENT CL. B C. A. By: Wurth e/z/o5 300 TON PAVING ASPHALT 18 TON PAVING ASPHALT OIL TAKING PART Manual OIL TAKING PART MANUAL OIL TAKING TAKEN GEOREST — PAPPONTO Sample per 9-4.7 of Const. Man 54mple. Taken Acceptance Bample(s) Required V 5-03.9(3) 5-04.05 ACCEPTANCE CONT. Man 54mple. Taken 5-04 ACCEPTANCE CONT. Manual OIL TAKING TAKEN	VENE	_	BY: Met		16817. 108 F. 160
300 TON ASPHALT CONC. PAVEMENT CL. B Sample per 9-4.7 of Const. Man Sample Takel Georest - Appland 5-04 C, A. By: World & 2/65 QPL QPL COOE E148 18 TON PAVING ASPHALT OTHER TON PAVING ASPHALT	015.01			1 Acceptance Sample(s) Required ✓ Rar F-16€	9-03.9(3)
300 TON ASPHALT CONC. PAVEMENT CL. B 2, A. By: Muly \$2/65 QPL \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				SAMPLES TAKEN GEOTEST - S APPONE	A
18 TON PAVING ASPHALT OCCUPANDED PROJECT OF STORT OF STO	016.01	300	ASPHALT CONC. PAVEMENT CL. B. \mathcal{L} , \mathcal{A} .		5-04
18 TON PAVING ASPHALT Acceptance per 9-4.2 & 9-5.7 of Const. Manual 9-02.1(4) VICE See Current OPL 74 P. R. A.			æ/2/05		
She 16.01 OIL MANGUE TAKEN OIL She CurrentOPL) Z1 48	016.02	18		Acceptance per 9-4.2 & 9-5.7 of Const. Manual	9-02.1(4)
91/7	TONE		See 16.01	oth shape Taken	-11
			-		
Page 1 o					Page 1 of 12

ROM as a Tracking Document - Low Tech (paper & ink) Version 'Working ROM

2

Chief Inspector - Jim Ryan

Contract TA 1862

City of Washington Project Manager - Do It Right

Bid Item	RAM #	ApvI Code	Description	Acceptance	QPL? Specification Ref.
Qty/Unit	Apvl Date				
122.01			HMA CL. 1/2 IN. PG 64-28	Sample per 9-4.7 of Const. Man.	2-04
6165/Ton					
	10	1	Ace Paving Co, Inc		
	6/6/2007			8 Samples from 10/20/2007 to 10/25/2007	
				10/27/2006 Statistical Accept Sent to Contractor	
122.02			PAVING ASPHALT	Acceptance per 9-4.2 & 9-5.7 of Const. Manual	Y 9-02.1(4)
369.9/Ton					
	10	2	US Oil & Refining	LAG Exception per Appendix 52.108	
	6/6/2007			BOL on file	
122.03			CL. 1/2 IN. MIN. AGG.	4 Acceptance Sample(s) Required	9-03.8
795.1 Tons	S				
	10	1	I-102 - Ace Paving Pit	4 Samples from 10/20/2007 to 10/25/2007	
	6/6/2007		ASA Report on file		
122.04			ASPHALT FOR TACK COAT	Supplier's Cert of Compliance or See Current	Y 5-04.3(5)A & 9-02.1(6)
	10	2	US Oil & Refining - CSS1 Emulsion	BOL on file	
123.01			HMA CL. 1/2 IN. PG 64-28 PATHWAY	Sample per 9-4.7 of Const. Man.	5-04
480/Ton					
	10	8	Ace Paving Pit I-102	Small Quantity Acceptance - Visual	
			ASA Report on file	Visual/SQ Acceptance statement on file 10/29/2007	
123.02			PAVING ASPHALT	Acceptance per 9-4.2 & 9-5.7 of Const. Manual	Y 9-02.1(4)
28.8/Ton					
	10	2	US Oil & Refining	LAG Exception per Appendix 52.108	

"ROM as a Tracking Document - In Excel Spread Sheet"

Material Approval - QPL

Using the Qualified Products List (QPL) for Material Approval

Approval is— the process that determines the material submitted is appropriate for the intended use

The QPL is <u>one way</u> for the contractor to request material approval. It is a listing of manufactured products available that have been evaluated and determined suitable for use in highway construction. Each item in the QPL is qualified and listed under the specification for which it may be used. Use for other purposes is not acceptable.

What's Really Important?

When you get a QPL Submittal from the contractor check that the specification listed for the product matches the specification listed on your Record of Materials. If it does, you can approve and use the QPL item on the project. If it does not, reject the submittal and return it to the contractor immediately.

When a Contractor chooses to use the QPL, the most current list available at the time the product is proposed for use, will be used. The QPL submittal must be prepared by the Contractor in accordance with the instructions in the QPL and submitted to the Engineer prior to use.

Inspectors need to check that what is used is what was approved and document it. IDRs or separate acceptance documents may be used, be sure to put a copy of any documentation in the file for that material.

Qualified Product List Page 1 of 1



August 2, 200

Qualified Product List

Contractor Product Information

Contractor: Lakeside Industries, Inc Sub Contractor: Date: TA3399

Bid Item: 20.02

Contract No: TA3399

08/10/2006

Manufacturer: U.S. Oil & Refining Co. - Tacoma, WA

Product Name: PGAB: 58-22, 58-34, 64-22, 64-28, 64-34, 70-22, 70-28, 70-34, 76-22.

Standard Spec: 9-02.1(4), Asphalt - Performance Grade Asphalt Binders (PGAB)

Product Description : Performance graded asphalt binders

Product Restriction:

Acceptance Code: 2148

Code Description: Bituminous materials may be accepted by the Engineer based on the asphalt binder supplier's Certification of Compliance incorporated in their Bill of Lading, reference WSDOT Std Spec 9-02.2(1). The Certification will include a statement certifying specification compliance for the product shipped. See Construction Manual 9-5.7 for requirements of sampling frequency.

Note 1 : Check Approved Mix Design for Anti-stripping requirements.

Last Updated: Aug 4, 2005

To be completed by the field inspector:

Quantity: _____ Verified By: ____ Date: ____

http://www.wsdot.wa.gov/biz/mats/QPL/QPLPrint.cfm?Product_no=1993027&product_ori... 8/2/2006

Material Approval - RAM

Using the Request for Approval of Material- RAM (DOT Form 350-071) Construction Manual 9-1.5A

Approval is—the process that determines the material submitted is appropriate for the intended use

The Request for Approval of Material (RAM) is the <u>second way</u> a contractor can request material approval. The RAM can be used when the Contractor elects not to use the QPL or the material is not listed in the QPL. The completed RAM will be submitted to the Engineer for approval before the material is incorporated into the work.

What's really Important? Investigate, then Approve or Disapprove the material submitted on the RAM

When you get a RAM Submittal from the contractor check that the specification listed for the product matches the specification listed on your Record of Materials. If you don't know about the manufacturer of the specific material or the manufacturer of the item isn't listed in the QPL for that item, further investigation is required. Ask for information from the contractor. It is their responsibility to prove the material is suitable for the application. The only person who should approve a RAM in your office is the one who is responsible for the work. . . . Your PE or the PE's designated substitute.

A more in-depth product evaluation is required on a RAM than a QPL. You may use the QPL to approve a RAM as long as the exact material for the exact specification is listed in the QPL. Use the equal QPL code from the list at the bottom of the RAM or the QPL code to approve the material. If you have questions about approving materials on either RAM or QPL contact your Region Local Programs Engineer.

Contract	ntract Number	FA Number Federal Aid N	umber	SR		Date 8/10/20	106
Section	ntract (vanioci	Tederal Aid IV	umber	Co	unty	0/10/20	
Here to 7			Ia	Οι	ir County		
Contracto Really G	or Freat Guys Who Build Roads		Subcontractor				
			•		For \	WSDOT	Use Only
For ass	istance in completing, see Ins	tructions and Exan	nple		RAM#		101
Bid Item No.	Material or Manufacturer's Product/Type	Name and Location Manufacturer or		Specification Reference	PE Appr'l Code	Hdqtr. Appr'l Code	File No.
20.01	HMA Class 1/2" PG 64-28	Lakeside Industries	Inc.	5-04	1		
20.02	PG 64-28 Binder	Chevron - Richmond	l Beach	9-02.1(4)	1,2		
20.03	Class 1/2" Min Agg	Proctor Creek D-310	5	9-03.8	1		
20.04	Tack Coat	Paramount Petroleur	n, Seattle, WA	5-04.3(5)A 6 9-02.1(6)	2148		
20.05	Anti Strip	Ultracote UP-5000		9-02.4	**		
Project E	ingineer	Date	State Materials	Engineer		Da	ite
 Conc Conc Conc Conc Conc Conc 	ditionally Approved: Acceptance based ditionally Approved: Submit Mfg. Cert. ditionally Approved: Submit Catalog Cuditionally Approved: Submit Shop Draw ditionally Approved: Only 'Approved for Submit Materials C	of Compliance for 'Approvits for 'Approval' prior to usings for 'Approval' prior to Shipment' or 'WSDOT Ins	teport for samples al' prior to use of r se of material. fabrication of mat spected' material s ect Engineer.	of materials to material. terial. shall be used.		-	ot.
	ce Approved:		, ,,				
	oval Withheld: Submit samples for oval Withheld:	preliminary evaluation.					
Remarks **Rec	s: quirement Waived by the city engin	eer 08/11/2006					
Project E	Engineer Distribution actor		State Materials		tribution	nection	
☐ Contra		INICIELIGIA	Gonorai i lic	L		Poolion	

Request for Approval of Material

What else is really important?

Approval of the material IS NOT acceptance of the material. Additional acceptance actions as noted on the approved RAM or QPL need to be completed prior to the materials being incorporated into the work.

When requesting approval of an item that requires fabrication, both the fabricator and the manufacturer of the material or product shall be identified on the RAM.

To track the Approval documents, transfer the information from the RAM or QPL to the "maintained" Record of Materials. Each inspector should have a current copy of the ROM that relates to the work they are in charge of and sometimes, copies of the approved QPL and RAM submittals.

Material Approval - QPL

Material Acceptance is – the process that you apply to prove the material meets specifications

The QPL listing is divided into two categories, materials that are:

- 1. "Approved" (A) and materials that are
- 2. "Conditionally Approved" (CA).

Approved (A) products may be accepted without additional sampling. It is the Inspector's responsibility to verify and document the manufacturer of the approved product (usually Visual Acceptance).

Conditionally Approved products require additional, acceptance actions and proper use is based on additional test results and/or documentation.

• Most additional acceptance actions need to be completed prior to the material being incorporated into the work.

All requests for approval of material, either RAM or QPL should show the name of the contractor, contract information, applicable specifications, and bid item numbers.

Material Acceptance - RAM and QPL Codes

Make sure all actions as designated by the RAM and QPL codes are performed prior to or at the same time as the material is being used.

Material acceptance actions are:

- Manufacturer's Certificates of Compliance Prior to use
 - o QPL Code generally ends in **20XX**
 - o RAM Code 2

- Fabrication Inspection Prior to delivery on the jobsite
 - o QPL Code **5XXX**
 - o RAM Code 5, usually when this code is used a code 4 (shop drawing) and a 6 (COMO) are also used
- Visual Inspection At the jobsite, before installing
 - o Applies to any material, when you sign a paynote or submit pay documents, it is assumed you have checked and verified all materials are as submitted.
- Test Reports Prior to or concurrent with
 - o QPL Code generally ends in **10XX**
 - o RAM Code 1
- Others as defined in contract documents

Manufacturer's Certificate of Compliance (Standard Specifications 1-06.3)

Some materials can be accepted based on receipt of a Manufacturer's Certificate of Compliance. These certificates must be received by the engineer prior to incorporating the material into the project. Look at the Record of Material and Appendix 52.108 of the LAG to determine which products may be accepted by Manufacturer's Certificate of Compliance.

The contractor may request authority from the engineer to install such material prior to submitting the required certification. This request must be in writing. If the request is approved (also in writing), no payment will be made until adequate certification has been provided. Document all of these actions in the files

If the required certification is not submitted prior to the completion date of the contract, the Contracting Agency will assess the usefulness of the installed material. At the Engineer's discretion, the Contracting Agency will either require replacement of the material or process final payment without paying for the materials or any portion of the work performed to install the material.

Transmittal of Manufacturer's Certificate of Compliance (Check List) (Construction Manual 9 1.5E)

All material certifications for the material incorporated into the project shall be reviewed for compliance with the specifications. We recommend that the WSDOT checklist "Transmittal of Manufacturer's Certificate of Compliance" (WSDOT Form 350-572) be utilized to assist your evaluation. If all the checklist items can be answered "YES," sign the completed checklist "Approving" the Manufacturer's Certificate of Compliance. If all the checklist items except No. 2 and 7a, cannot be answered "YES," sign the completed checklist and return it to the Contractor for corrections, clarification and

resubmit for approval and payment. As with RAMs, your Project Engineer or appointed alternate should sign these transmittals.

The approval of the following Manufacturer's Certificate of Compliance required three different documents:

- Fabricator's Certificate of Compliance
- Rebar Order (Cut) Sheets for verification of quantity
- Certified Mill Test Report from the manufacture of the base material

You really **NEED** to know the material sent is what your contract asked for. Check all Manufacturer's Certifications against the project requirements

Cont 432 Proje WS Mi 18	g, or admixture gract Number geography ext Engineer: S Department of ke L. Nemi, P. 102 N.E. 10th a cached Manufact	SR Number 12 f Transportation E.	Sec MP	tion 28.3 t	29.1	Contractor: Mowat Construction, Inc. Vancouver, WA
Sect	tion 1-06.3 of the	e Standard Specificatio	ons per ti	he chec	NO	hown below. , has been checked for conformance
3	this item of Mate Is the certific PRIOR to the ma If the answe attached is a copaproved reques prior to providing acceptance. Has an appreceived for this Does the Mf quantity of mateiplaced by type, so See Note 2 Does the mathematic Does the Mf quantity of matein attached by type, so the Cartification of Does the Mf applicable contral.	roved RAM/QPL been item? fg. Cert. identify the nater and/or fabricator? g. Cert. identify the rial being certified and size, lot, or heat numb otterial being placed material	o O," otall ame /or er? atch			8. Does the Mfg. Cert. provided show the material conforms to the required specifications? (i.e., WSDOT, AASHTO, ASTM) See Note 4 9. Is the Mfg. Cert. signed by a corporate official? 10. When more than a single delivery is made, are the lot numbers identified? 11. Is a supporting mill test attached showing the physical and chemical test values meeting applicable specifications? See Note 3. Remarks: This is a sample for training purposes only.
1. 2. 3. 4.	Check the Re Rebar cut sh Test values r Manufacturer's If answer is " Accepted as p	ecord of Materials (RC eets may be used in li equired to be supplied Certificate for some st NO," submit Manufact proper documentation	eu of bill I with Ma teel items turer's Ce per Sect iance sui	of ladir inufactus, such ertificate ion 1-0i bmitted	ng or invurer's Ceas steel e to State	ertificate for steel reinforcing bars and structural steel. el culvert pipe items, may reference heats used. ate Materials Laboratory for approval. the Standard Specifications. the Materials Laboratory for "Approval Action."

Transmittal of Manufacturer's Certificate of Compliance



C 4329 BI# 12 12

FABRICATORS CERTIFICATE OF COMPLIANCE

CONTRACTOR:	Kebar	
PROJECT: NE 78th to	Salmon	CHC
G.S.C. JOB #: 9394	·	
W.S.D.O.T. CONTRACT	2	
RELEASE NUMBER(s) 7213, 72	163	

The reinforcing steel covered by this certification was manufactured and fabricated in compliance with the Standard Specification of Washington State Department of Transportation and ASTM A615. Based on rolling mills documentation, it is certified that representative samples of the material have been tested and that test results conform to the applicable requirements listed above.

Copies of these certified test reports for each heat number are enclosed.

Each heat number and bar size are listed on the summary sheet.

Signed: \bigvee

hristi Phelps, MTR Dept.

Date:

RECEIVED

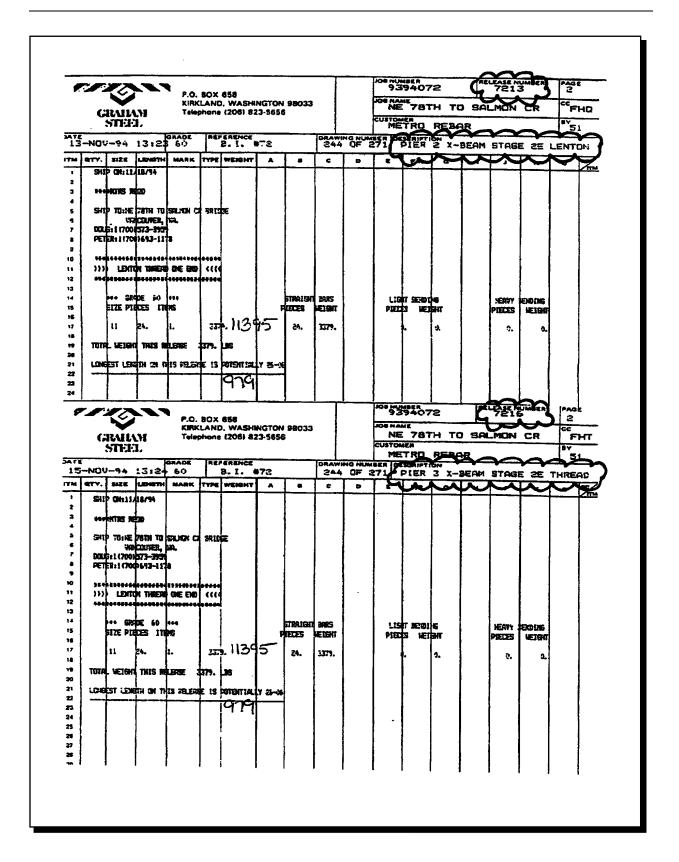
NOV 2 3 1994

6758 163

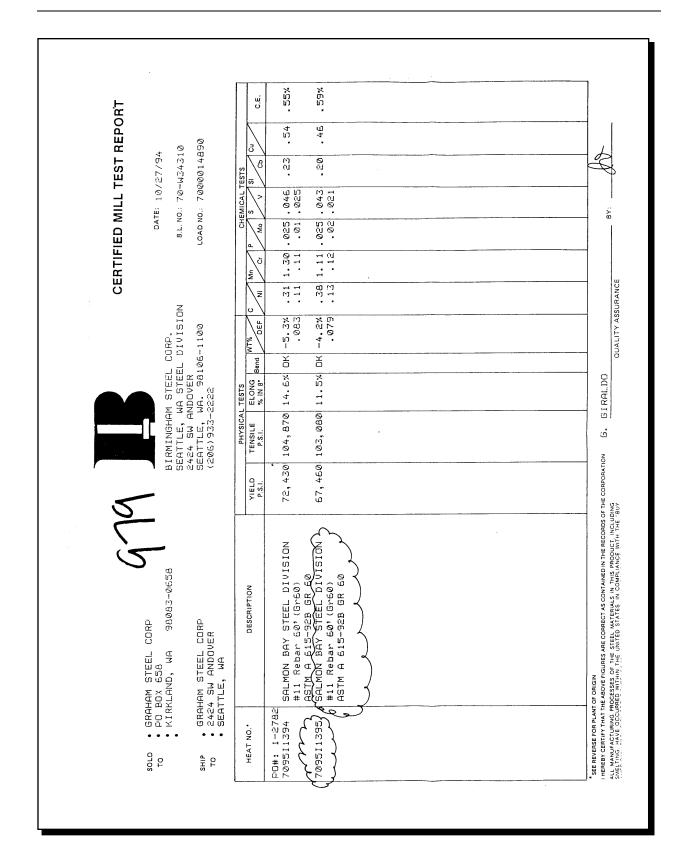
MOWAT CONST CO. / V.O.

Graham Steel Corporation, P.O. Box 658, Kirkland, Washington 98083, (206) 823-5656, Fax (206) 823-1590, Contractors Lic. #223-01-GR-AH-AS-C215C6

Certification of Compliance — Fabricator



Rebar Order (Cut) Sheets



Certified Mill Test Report

Manufacturer Certificate of Compliance

I. Acceptable Mfg. Cert. — Received

Project Office — Do's

- 1. Advise field engineer and inspectors of status of all **acceptable** or **approved** Mfg. Cert. received.
- 2. Know which lot or other product identification is on the approved Mfg. Cert.
- 3. Accept for payment only those materials for which there is an **approvable** Mfg. Cert. on file.

Field Inspector — Do's

- 1. Know if an acceptable or approved Mfg. Cert. has been received.
- 2. Know which lot or other product identification is on the **approved** Mfg. Cert.
- 3. Check that material delivered to project matches that identified on Mfg. Cert. and provide information to office.
- 4. Check material delivered for shipping damage.

II. Unacceptable Mfg. Cert. or Missing Mfg. Cert.

Project Office — Do's

Advise field engineer and/or inspectors of the status and acceptability of all Mfg. Cert. received.

Field Inspector — Do's

- 1. Check materials delivered to project, record lot numbers or product identification, provide information to office.
- 2. Advise contractor that a letter is needed to waive requirements of Section 1 06.3 of *Standard Specifications* and allow installing materials prior to receipt of **acceptable** Mfg. Cert.

Project Office — Don'ts

Make payment for the work when an **acceptable** Mfg. cert. has not been received.

Field Inspector — Don'ts

Allow installation of material without advising contractor that payment will be withheld until acceptable Mfg. Cert. is received. Per Section 1-06.3 of *Standard Specifications*.

Fabrication Inspection, What is it and Why is it important?

Fabrication inspection is performed while a product is being fabricated. Precast concrete products, structural steel members, signs, and bridge bearing pads are some of the items that are inspected during their manufacture.

Fabrication Inspection is important because it allows trained inspectors to look at the construction, materials, and technique while the items are being built. Problems that may arise from improper fabrication are resolved before the item is delivered to the jobsite.

WSDOT Materials Lab provides Fabrication Inspection to Local Agency and WSDOT projects. There is a charge for this service so it is important to know what is being inspected and where the products are made. In some cases other inspection services can be used, Contact the Region Local Program Engineer for help arranging Fabrication Inspection or questions about who can inspect these items.

Visual Inspection, What is it?

Visual inspection is done on literally all materials incorporated in the work. Some items are accepted solely on the basis of a visual inspection and a RAM or QPL for the product will indicate that is the case.

Visually inspected means you took the time to check that the contractor used the right thing and it was acceptable at the time the contractor used it.

What's Important?

Visually accepted materials are the sole responsibility of the project inspector. When you approve payment for an item it is assumed you have done your job and visually inspected and checked that the correct materials in this category were used.

Do not accept damaged material or material that was not preapproved.

Sampling and Testing - There are Three Different Types of Sample

Preliminary Samples and Tests (Construction Manual 9-1.3A)

Preliminary samples are intended to show the general character of the materials available or proposed for use. Preliminary samples are a basis for approving which aggregate site or brand of material will be considered for use. The samples shall represent an identified lot of materials.

Often preliminary samples are used to approve materials submitted on RAMs.

Acceptance Samples and Tests (Construction Manual 9-1.3B)

Acceptance samples and tests are defined as those samples tested for determining the quality, acceptability and workmanship of the materials prior to incorporating the materials into the project.

Verification Samples and Tests (Construction Manual 9-1.3D)

Verification samples and tests are used for making checks on the reliability of a manufacturers test results when acceptance of the material is based upon a Manufacturer's Certificate of Compliance or when an agency wishes to verify test results provided by a testing lab (this type of test is also referred to as an "Assurance" test).

Sampling and Testing Schedule (Construction Manual 9-5.2)

The testing frequency schedule in Chapter 9-5.7 of the *Construction Manual* covers the minimum requirements for sampling and testing at the project level for concrete, all aggregates, HMA and asphalt materials. It includes a list of the types of tests required.

Your WSDOT ROM shows the number of required tests for each material on your project based on this schedule.

In some instances, good construction practice will necessitate more frequent tests to ensure adequate control of production.

What's Important?

Sampling and testing will be checked on selected items during a PMR. We will check that the correct number of tests were performed, that they passed, and if they did not pass, that appropriate actions were taken to address out of specification materials.

We will check the test results against the specifications. Do not rely on the testing lab's pass/fail remarks to prove the materials are acceptable.

Any material shown to be out of specification must be addressed by either removing and replacing or a change order accepting out of specification material with a **CREDIT**. This is considered a change to the contract and should be treated as one.

What's Important about testing?

Based on the number of tests required by the Record of Material and the *Construction Manual*, a reasonable quality for each material is established. Evaluation of the material test results and acceptance actions is verification your agency did, in fact, get what the taxpayers paid for.

Not testing material when required or improperly accepting material is cause for an unsatisfactory PMR which can result in loss of funding or potentially higher consequences. Yes, this is a very big deal. All out of spec materials must either be removed and replaced or accepted with a change order accepting an out of spec material with a credit.

Work Order No.	Class Mix	Sample No.		Plant	Location		Agg. Sou	ırce	Dat	e Sampled
TA3399	1/2"	1			North of Here		D	-336		6/28/2006
Time Sampled	Truck Number	Mix ID Numbe	er 9	% AC JI	MF % A0	C Ord	ered	% AC (Calc Fron	n Production
10:15 PM	375	G01133	399	5	5.2	5.	.2			
		Moistu	re Con	tent (WAQTC TI	1-6)				
	Initial	After 90 M	n.	Fina	ı					
Time	10:20	12:10		1:15	(3) Mas	s Mo	isture (1) -	(2)		
Mass	504.23	504.15		504.0)1					0.2
Tare	223	223		223	(4) Perd	cent N	Noisture [(3	3) / (1)] >	X 100	
Sample Mass	(1) 281.23	281.15	(2)	281.0)1					0.1
		Ignition F	urnace	Data	(AASHTO	T-30	08)			
(5) Mass of Empty	Basket(s)	-			(10) Chamber S	et Po	int (°C)			
			1200.0							1758.0
(6) Mass of Baske	t(s) and Sample		1750.0		(11) Calibrated	Aspha	alt Content	(Printed	Ticket)	5 22
(7) Mass of Sampl	e (Enter in Furnace	e Controller) (6	1750.0		(12) Corrected A	Aspha	It Content	(11) - (4	.)	5.22
() [-		, (-	550.0		(,	-1-		() (,	5.1
(8) Calibration Fac	tor				(13) Mass of Re	sidua	l Aggregate	(use to	calculate	e gradation)
. ,			0.10	6	,		00 0	`		e gradation) 521.9
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(9) Furnace Mass Sieve Size (in.)	Reading Accumu Mass	lative Percent	521.9 te Grac	dation	(14) Mass of dr	y agg	regate afto	er wash	**	521.9
(9) Furnace Mass Sieve Size (in.) * Record All Sieves	Reading Accumu Mass Retained	lative Percent	521.9 te Grac	dation	(14) Mass of dr	y agg	regate afto	er wash	** Spe	521.9
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(9) Furnace Mass Sieve Size (in.) * Record All Sieves 1/2" 3/8"	Accumu Mass Retained 0.0 84.0	lative Percent Retained	521.9 te Grac	dation tent sing 100 84	JMF	y agg	regate afto	ce	Spe	521.9
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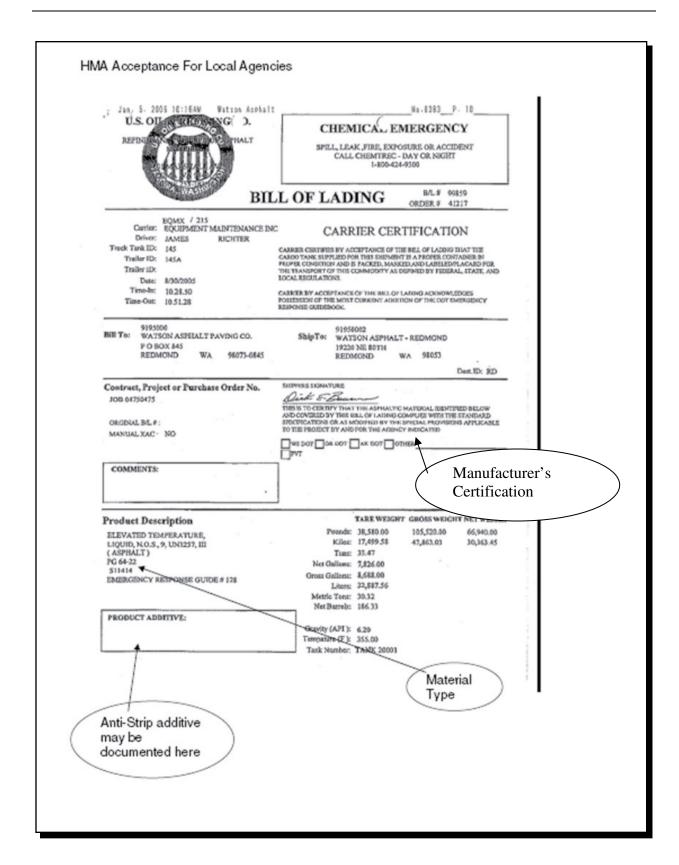
DOT Form 350-560 EF Revised 5/02

Ignition Furnace Worksheet

Distribution: State Materials Lab, Region Materials Lab, Contractor

												,
Date 6/28/2006	Region Northwest			Project Engineer The Good Guy	er Guy		SR Number N/A		Section North of Here		Contract Number TA3399	act Number TA3399
Class		1/2" HMA	Wearing Leveling	☐ Base	Air Temperatures Start 290 E	s End 288	Gauge Sei	Gauge Serial Number 321654	Rice Density 155.8	Correlati 1.0	Correlation Factor Pla 1.0035	Plan Depth (D)
Beginning Station En	Ending Station 138+12	Ahead on Sta. Back on Sta.	Lot Length (A) 312	(A) × 0.2] = (L)	gth = (L) 62.4	Width (W) 14	Lane Lt.	MB WB	□ NB □ Other □ SB	Lot # /	Lot # / Quantity ACF 1 400	ACP Test Temp. 185
Test (X) Value Number Table (716)	Random Length $(X) \times (L)$	ngth + Sublot (L) Increment		+/- Beg. Sta. = Test Sta.	(Y) Value Table (716)	Offset (Y) × (W)	Measured Depth	Core Density	Gauge Readings	Average Reading	Corrected Gauge	Percent of Rice
-	0	Zero	0	13500		0:0			146.5	145.45	145.959	93.7%
2	0	(L)	62.4	13562.4		0:0			144.5	145.55	146.059	93.7%
က	0	(L) x 2	124.8	13624.8		0:0			143.5	143.8	144.303	92.6%
4	0	(L) x 3	187.2	13687.2		0.0			144.2	143.95	144.454	92.7%
2	0	(L) x 4	249.6	13749.6		0.0			143.6	143.55	144.052	92.5%
Beginning Station En	Ending Station	☐ Ahead on Sta. ☐ Back on Sta.	Lot Length (A)	(A) × 0.2] = (L)	Jth (L)	Width (W)	Lane Lt.	□ R W □ MB	□ NB □ Other □ SB	Lot # / 0	Lot # / Quantity ACF 2 400	ACP Test Temp. 182
Test (X) Value Number Table (716)	Random Length $(X) \times (L)$	ngth + Sublot (L) Increment		+/- Beg. Sta. = Test Sta.	(Y) Value Table (716)	Offset (Y) x (W)	Measured Depth	Core Density	Gauge Readings	Average Reading	Corrected Gauge	Percent of Rice
-		Zero							143.5	143.8	144.303	95.6%
2		(L)							142.3	142.75	143.25	91.9%
က		(L) x 2							144.1	142.75	143.25	91.9%
4		(L) x 3							140.9	141.5	141.995	91.1%
5		(L) x 4							144.1	144.1	144.604	92.8%
Remarks This is all good stuff. The information contained in this worksheet is made up to make the numbers work in the SAM	uff. The info	rmation contain	ned in this wo	orksheet is m	nade up to ma	ake the num	bers work ir	the SAM	Rollers	s DDV s	>	
program.										Roller Codes: SDV - Single DDV - Doub P - Pneumat TS - Tanden	oller Codes: SDV - Single Drum Vibrator DDV - Double Drum Vibrator P - Pneumatic TS - Tandem Steel	Vibrator 1 Vibrator
Gauge Operator		Date	Stree	Street Inspector		Ö	Date	Contractor			Date	
T COO CLO												

Asphalt Concrete Pavement Compaction Report



Sampling and Testing Small Quantities of Materials (Construction Manual 9 5.2C)

The Engineer may elect to accept small quantities of materials without meeting minimum sampling and testing frequencies as outlined in the *Construction Manual*.

Indicate any nonstandard acceptance on your maintained record of materials. If there is not a comment noted on the Maintained ROM we will expect to see all required test reports.

Structural Concrete will not be accepted under small quantity acceptance.

Some issues the Engineer may consider prior to the use of small quantity acceptance are:

- Has the material been previously approved?
- Is the material certified?
- Do we have a mix design or reference design?
- Has it been recently tested with satisfactory results?
- Is the material structurally significant?

Material Specifics

Materials that require testing

1. Structural Concrete

Slump

Air

Temp

Compression Testing

Certification type delivery ticket per *Standard Specifications* 6-02.3(5)B is also required

2. Asphalt in the roadway

Density

Hot Mix

Certification of the Binder is also required

3. Surfacing under roadway & bridge approaches

Density

Gradation & SE

4. Base material under roadway, embankments, bridge approaches

Density

Gradation & SE

- 5. Geogrid behind walls
- 6. Structural Grout

Compression Testing

7. High Strength Nuts Bolts and Washers*

Manufacturer's Certificate of Compliance

Certificate of Material Origin also required

* See section 9-06.5 of the Standard Specifications for Road, Bridge, and Municipal Construction

Materials that can be accepted by Certification

1. Steel

Manufacturer's Certificate of Compliance

Certificate of Material Origin

2. Iron

Certificate of Material Origin

3. Liquid Asphalt Products

Manufacturer's Certificate of Compliance

Special Note on PG Binder

The PG Binder **Bill of Lading** acts as a Manufacturer's Certificate of Compliance for the binder material. Look for the items that are checked on the example (slide and "At A Glance") on your BOL. The Bill of Lading should be delivered with each load of binder to the asphalt plant. The Asphalt Plant Inspector/Tester should pick up a copy from each delivery during the entire period of production of HMA for the project. Put these in your files.

The Certification for binder is part of the material acceptance documentation that will be checked during a PMR.

4. Geotextile Fabrics – Not including Geogrid behind walls

Manufacturer's Certificate of Compliance

5. Guardrail Items

Certificate of Material Origin for steel components

6. Monument Case and Cover

Certificate of Material Origin Move to Visual

7. Bridge Bearing Assemblies that are not welded

Manufacturer's Certificate of Compliance

Certificate of Material Origin

Material that can be accepted by Visual Inspection when approved by

Catalog Cut

- 1. Traffic marking paints and thermoplastics
- 2. Electrical items and accessories
- 3. Fencing
- 4. Landscaping or irrigation items
- 5. Drainage Items
- 6. Rebar Tie Wire
- 7. Backer Rod under RCS Expansion Joints
- 8. Rebar Chairs and Dobie Blocks
- 9. Temporary Items
- 10. Compost
- 11. Street furniture etc.

Notation should be made that all materials used were those that were approved for the project.

List of Materials that Require Fabrication Inspection

- 1. Structural Steel Beams or Fabricated, Welded items
- 2. Structural Precast Concrete Items
- 3. Bridge Bearing Assemblies that are welded
- 4. Signs?? perhaps this is changing!
- 5. Sign Bridges
- 6. Cantilever Sign Structures

Fabrication inspection must be performed by qualified professional companies that specialize in Quality Assurance services. Refer to WSDOT Construction Manual Section 9-1.5(D)1 for more detail about WSDOT Fabrication Inspection processes.

When inspection is performed by private inspection companies or other state Departments of Transportation, the Manufacturer's Certificates of Compliance and Certificates of Material Origin are also required to be in the project files.

Other acceptance actions

Your contract may list acceptance actions that are not common. Be sure to **READ YOUR CONTRACT** before starting any inspection of work that is covered by a Special Provision or GSP.

Final Contract Material Certification will be covered during the section on project closure.

Part 5B Filing and Tracking

Why do I care??

If you don't have a list, you won't know what's missing. If you don't know what's missing you won't ask for it. If you don't ask for it, you won't get all you need to satisfy the requirements.

Filing system basics

- Design your system for easy retrieval of information rather than storage
- Consider a log sheet for each file
- Don't let file folders get overfull
- Make a guide to files and keep in front or on top

To Test your system ask the following questions and look for the answers in your files. Better yet, ask someone who isn't involved in your project to do this.

- Can I locate all the payrolls for subcontractor ABC Excavating?
- Did I get enough passing tests for CSTC (or another bid item with quantity material)?
- Did CO# XX get executed so I can pay for the new items?
- Did they finally send in all the certifications for the reinforcing steel in the luminaire foundations?
- Can I retrieve all the data from one day of paving in five minutes or less? (RAMs, QPL submittals, mix design, delivery tickets, tests taken, test results, IDR, scale certs, bill of lading for oil, and scale checks)

What to track

- Contractor and Subcontractor submittals
- Materials approvals
- Materials quantities/testing/results
- Materials certifications and backup
- Payrolls
- Change Orders
- Wage Rate Interviews
- DBE Interviews
- Correspondence of any sort

Tips for making filing and tracking systems work for you

- 1. highlight problems while they are small (missing payrolls, interviews, certs)
- 2. know what is missing so you can ask the contractor to submit it
- 3. prevent "missed paperwork" that can't be gathered later
- 4. show follow up (test failed, retested 2 samples, both passed)

Part 5C Time For Completion & Schedule

Working Days

The people who designed your project made an educated guess about the order, duration and interconnectedness of the many activities that are components of your project. The contractor bids the work knowing what the number of working days assigned is and that the number isn't going to be changed for their convenience.

The way that Time for Completion can be changed - Write a change order showing added work, deleted work, or delayed work. Be sure you have a written justification in your change order file and that the change is based on changes in the work. You can't just write a change order at the end, either, without justifying the added time.

Schedule

In accordance with the *Standard Specifications 1-08.3*, the Contractor is required, within 5 calendar days of execution, to submit a schedule showing:

- The proposed order of work
- Projected starting and completion dates for the total project

Projected starting and completion dates for major phases of the work

Completion of all work within the specified contract time

Why do I care about the contractor's schedule?

An accurate schedule is important to you because it tells you the contractor's plan to get the work done in the number of working days you have specified in your contract documents. This accomplishes several things:

- Confirms that there is a way to get the work done if all goes reasonably well
- Gives you an opportunity to review the contractor's plan for reasonableness
- Identifies a time frame for key activities to help you schedule your own resources
- Defines critical activities

Isn't the 2 week schedule they give us at the weekly meeting good enough?

No. It's a useful tool for planning and anticipating the near future but doesn't provide an overview of the entire project. You need a bar graph or CPM schedule.

Bar Graph or CPM – why do I care which they submit?

For larger and more complex projects the contractor submits a schedule developed using the CPM or Critical Path Method. Smaller projects may have a General Special Provision in the special provisions allowing the use of a bar graph. Here is the essential difference:

- A bar graph can simply be a listing of activities and the general order in which they will be accomplished. By itself it doesn't tell you which work must be done before other work can happen.
- A CPM schedule shows the same list of activities but clearly demonstrates how those items of work are interdependent. You will use the critical path to.
 - 1. Spell out critical activities which you will need to know to prepare the Weekly Statement of Working Days.
 - 2. Point up problems or conflicts not previously identified.
 - 3. Determine additional days for change orders.
 - 4. Aid in analysis of delay or changed conditions claims.

What do I do with it now that I've got it?

Review it and document that you did by dating and initialing.

- Are all key activities included?
- Are potential conflicts addressed?
- Are the activities shown as critical actually critical?
- Do you believe the durations shown are reasonable?
- Are all activities shown that can delay the next activity?

Reviewing tip - Start at the end of the schedule and work to the front to catch problems.

When do I need to ask for a revised schedule?

The requirement to finish the project in a specified number of working days can only be changed if work is added or deleted by change order. If your contractor is significantly behind (subjective – you don't think they can catch up soon) then you need to know what their plan is to finish the work within the allowed working days. This is what a Revised Schedule will show you. Ask for it, insist on getting it, take time to review it.

Why is this such a big deal?

When projects drag on, contractors lose money. When contractors lose money they look for a way to recoup their losses. You will see this as more requests, change orders, delay claims and complaints. You will need a revised schedule to help you manage these submittals and respond appropriately. Otherwise you may end up paying more than you should. This also explains why contractors resist most requests for a revised project schedule. Insist at the weekly meetings. Insist in writing. Keep insisting.

Weekly Statement of Working Days (WSWD)

Your agency is required to prepare a Weekly Statement of Working Days. This form counts down, day by day, through the life of the project. The contractor is charged one working day* whenever work can be performed on a critical activity. You determine critical activities by looking at the contractor's schedule.

Complete the form weekly and mail to the contractor. They have 10 days after receipt to protest the working day charges.

Appendi	ix 52. <u>10</u>	<u>6</u>			екіу	Stateme	ent of Wo	rking Da
				mple S			AVC	
	CONTRACTOR		EKLY STATE	MENI	OF W.	JRKING D	AYS	
	ADDRESS (Street,							
	CONTRACT NO.	FEDER	ERAL AID PROJECT NO. HIG	IGHWAY NO. OR COU	NTY	STATEMENT NO.	DATE	
	THE FOLLOWING	STATEMENT SH	HOWS THE NUMBER OF WORKING D			T FOR THE WEEK ENDING:		
	DATE	DAY	WEATHER CONDITION	WORKABLE	UNWORKABLE DAYS	REASON FOR UN	NWORKABLE DAYS	
		Monday						
		Tuesday Wednesday						
		Thursday Friday						
		Saturday						
			DAYS THIS WEEK DAYS PREVIOUSLY REPORT	red		NOTE: ROUND ALI NEAREST 3	L TIME TO THE % DAY.	
			TOTAL DAYS TO DATE					
	WORKING	G DAYS SPE	CURRENT STATUS CIFIED IN CONTRACT					
	1	ED EXTENSIO	ON OF TIME TIME OF CONTRACT					
	LESS WO	ORKABLE DAY	YS CHARGED					
		F WEEK'S ACTI						
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					PROJECT	ENGINEER		
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	\rightarrow no	TE: The corre	contractor will be allowed ectness of this statement,	10 days fror , otherwise it	n date of thi shall be der	is report in which to emed to have been	protest in writing the accepted as correct.	

LAG Manual Appendix 52.106

Workable vs. Unworkable Day

You need to understand this to complete the "weekly statement" and to deal with delay claims.

WORKABLE DAY: A workable day means that the contractor could reasonably be expected to perform CRITICAL work on that day and to get a reasonable amount of productivity. By this criteria, the contractor could easily be charged a working day during harsh weather or when they do not appear on site.

UNWORKABLE DAY: An unworkable day means that the contractor could NOT reasonably be expected to perform CRITICAL work on that day or to get a reasonable amount of productivity due to circumstances beyond the contractor's control. By this criteria, your contractor may have people working that day but be unable to perform the CRITICAL ACTIVITY work for reasons beyond their control. Note that the contractor staying away doesn't make it unworkable either. The defining element is whether or not CRITICAL work could have been performed that day.

PARTIAL DAYS: Some days are only partially workable. Sometimes weather (extreme cold, snow and ice or hard rain), natural disaster (floods), or other events out of the contractor's control (traffic accident or vandalism) prevent the contractor from getting full production with a normal crew and/or normal effort. In these cases, you have the option to charge partial days - usually ½ days.

Write weekly statements every week unless work is suspended.

When work is suspended be sure to issue a "Suspend Work Order" and

When work is resumed be sure to issue a "Resume Work Order". Both situations must be written to the contractor.

Part 5D Inspector's Daily Reports

Construction Manual 10-3.6B Every inspector should be writing a daily report of activities on the project. Most agencies use WSDOT's Inspector's Daily Report Forms 422-004, 422-004A, and 422-004B to document daily activities. A similar "personalized" version can be used if it includes the same key components. On a complex project, more than one person will be writing IDRs. Be sure that the coordination is good so somebody is covering all aspects of the work. Explain any gaps in IDR dates.

Page one of the WSDOT IDR form is a structured sheet of questions addressing identification of work operations and the associated labor and equipment being used to accomplish the work. This page should be filled out completely. Be sure your form includes these key components:

• Work operations – what is being done, who is doing it, which equipment, location

- Other equipment on site but not being used
- Testing and/or test results received
- Delivery of materials
- Questions or clarifications to or from the contractor
- Direction given to the contractor
- Conflicts or disputed work
- Weather
- Unusual conditions
- Delays in the operation and why
- Presence of visitors, meetings, and decisions reached
- Safety concerns
- Traffic (minor traffic control projects only otherwise use Traffic Control Report)
- Photos taken
- Sign it in ink

This can be hand written in ink on the form or entered electronically on a laptop. The electronically produced document must be complete, including a hand written signature in ink. It should be reviewed by the Project Manager, Chief Inspector or other individual in your organization. That person needs to initial and date that the IDR was reviewed.

This signed and reviewed IDR is the official one and is filed in the project records. Any duplicate copies remain with the inspector and may be discarded when they are no longer useful.

Page two is the narrative portion. This is a place to write facts, not opinion.

Instructions for Inspector's Daily Report

Note:This report is to be filled out for every day that the project is active, even if no work is done. An explanation of why no work was performed should be given if applicable.

Weather

Use up to four weather descriptions from the following four groups as applicable. Fill out separately for both AM and PM.

HOT 80+ degrees CLR Clear RAIN Rain HAIL Hail
WARM 50 - 80 degrees PCLD Partly Cloudy HVRN Heavy Rain SNOW Snow
COOL 30 - 50 degrees OCST Overcast FZRN Freezing Rain HWND High Winds
COLD 30- degrees FOG Fog DUST Blowing Dust

Contractor's Work Activity

Describe the Contractor's work activity. An activity may involve several bid items. Generally, list only one activity per sheet. Use additional sheets if necessary. If more than one activity is listed per sheet, be sure to identify which labor and equipment correspond to the respective activities. Chief inspectors should list all of the Contractor's work activities.

Contractor's Equipment

List all equipment, including identification or model numbers and a description such as size, horsepower, capacity, etc. Show how many (No.) of each type and the hours worked using the following status terms:

Operating (Opr) Equipment is working full time on the activity.

Standby (Stdby) Equipment is involved in an activity and being held to work on it by order of the engineer. If being

held and not able to work on the activity, note reason on diary page.

Down Equipment is broken and needs repair in order to be used for work.

Idle Equipment is not being used, is not down, and is not involved in the work activity.

Contractor ownership may be shown using the letter identifications A - E from the list of contractors above the "Contractor's Work Activity" section. Note equipment move-in and move-out on diary page.

Contractor's Workforce

List the number of employees and hours worked by classification for all employees of the Prime Contractor and each subcontractor and agent separately. Identify the employing contractor or subcontractor using the letter identifications A - E from the list of contractors above the "Contractor's Work Activity" section.

Show the number of male and female employees in the space provided and identify the number of apprentices or trainees.

Item, Description, and Location of Work

If a change order item number has not yet been assigned, write "New" for the item number.

Refer to Chapter 9 of the Construction Manual and to the Record of Materials for the number of samples required for each item or portion of an item. Note: Be sure to take enough samples. A failing sample may require two retests.

No material is to be installed without an approved source, see Form 350-071, "Request for Approval of Materials Sources."

No material is to be installed without proper approved materials documentation or prior written PE approval. Approved materials documentation may include any of the following: Form 350-109, "Certification of Materials Origin," Form 350-077, "Materials Acceptance Report," pipe certifications, manufacturer's certification, approved welding procedure, or approved test report(s).

Traffic Control

Note requirement of TCS and Traffic Control Labor on the project site.

Diary

Record only facts. Use of available specialized inspector checklists may be referenced on the diary page and attached to the IDR.

Additional Information

Subcontractors and agents are not to begin work until they are approved.

If a subcontractor or agent is a DBE contractor, even if not a condition of award, Form 272-051, "M/D/WBE On-Site Review," must be completed prior to the subcontracted work being finished.

On Federal-Aid projects, Form 424-003, "Employee Interview Report," must be completed in accordance with Chapter 1-2.6 of the Construction Manual.

Work is not to be performed on a Change Order item until the change is formally approved or verbally approved.

Form 421-010, "Report of Prime Contractor's Performance," must be filled out in accordance with Chapter 1-2.8 of the Construction Manual immediately after work on the project is completed.

DOT Form 422-004 EF Revised 4/97

Instructions for the Inspector's Daily Report

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Inspector's Daily Report

Movie Time

Inspector's Daily Report

Five C's of Good Report Writing

Clear

Being clear refers to both handwriting and meaning. Messy handwriting is unprofessional; take the time to write neatly. Written material is useless if it cannot be read and understood.

Being clear in meaning is just as essential. What ever is written has to be clear, even to people not involved with the project. It can become a habit to write a kind of short hand that project personnel understand, but others may not. Other personnel, including auditors, may have to review your documents, months or even years after the project is complete. What may be clear to project personnel now, may be unclear to an auditor at a later date.

Concise

Being concise means using the minimum number of words to get the maximum amount of meaning. The rule is, write enough to be clear, but not any more than is necessary. Record the facts and keep your opinions out of the project diary.

Correct

Being correct means having your facts straight and using the right forms. Using the wrong forms, or making errors, gives the appearance of sloppiness and can cause big problems in arbitrations or litigation proceedings.

Complete

Being complete means including everything necessary to be clear. To be complete, the entry should contain four criteria:

- Activity A description of the activity, including location.
- Testing Any testing done, or the acceptance criteria that was used.
- Results The results of any testing.
- Action Taken Any action that may have been taken.

Another aspect of being complete is referencing other types of available project documentation. Be sure to mention any photographs, videotapes, contract documents, materials documentation, or anything else that would relate to your entry.

Concurrent

Contract documentation should be completed concurrent with the construction activity. Extensive facts, figures, and conversations are hard to remember:

write them down as soon as possible. If it is not practical to write everything down immediately, then take abbreviated notes. Waiting until the end of the day to write everything down, may cause you to forget important details.

Apply what we've covered with the following exercise.

Photographs (Construction Manual 10-3.14)

Pictures are an important part of the project documents. This could include 35 mm or digital photos, infrared photographs, video, etc. Whoever has the best documentation wins any argument about the past. Be sure yours is the best. Pictures are a compelling part of that discussion.

What do I photograph?

- unusual equipment
- construction methods
- problem areas
- areas of possible controversy
- traffic control
- conditions in the area of an accident
- proof of fabrication inspection
- "before" and "after" views taken from the same vantage point
- safety issues

What do I do with all these pictures now?

Your photo is only as good as your documentation of when, where and why it was taken.

Turn on your date/time stamp. Make a note in your project diary or IDR. Remember not to say anything while recording video that you wouldn't like to hear played in court.

• Ideally you are labeling the back of each photo like this:

Contract: SA-3228

Project: Allen Street Bridge

Date Taken: 2/17/00, 1:00 pm

Taken By: J. Sorrell

Direction Looking: Northwest

Description: Setting girders in span 3.

In case you aren't, at least do one or more of the following:

• Save each download in a computer file labeled with your name, date and the project name. Back up regularly.

- Print out selected pictures on plain paper for the file and do at least minimal labeling.
- Burn a CD regularly (weekly?) and store it with the contract documents.

Project Diary

In addition to the Inspector's Daily Report, we recommend that you have a method to capture high level, off-the-project conversations and e-mails. The most important thing is that your agency doesn't lose track of off-the-project conversations and decisions that affect the project. This would include communication from the project manager and other key agency staff or from consultants. The issue that we are trying to avoid is when the City/County engineer or the consultant attends a meeting or has a phone conversation or makes a decision and it doesn't get recorded.

WSDOT offices use a bound book called the Project Diary. You may find it more useful to have a file folder for these records. The important thing is to have a way to capture notes to file, telephone conversation logs, and e-mails about discussions and decisions that affect the project.

At the end of the project, be sure that all diary-type entries are in your records, even if they are stored on CD rather than paper records. Although this system isn't as fast for retrieval, at least the information is all captured. In case of an audit, claim or review, the information is available.

		Washington State Department of Transportation	
•		Region	
		Project Engr	
•			<u>. </u>
		IF FOUND DROP IN ANY MAIL BOX	
		RETURN POSTAGE GUARANTEED	
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Construction Project Diary Page 1 of 2

	Day	Date
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existing water line was occas	ionally caus	sing
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agreed that the delays were	random a	nd of
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of the delays we agreed That but	h Re inspec	tou and
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9-1-04		
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9-6-04	•	
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I also asked him to inform	The Contra	tov.
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	Indicated by Suite by	www.y.
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Construction Project Diary Page 2 of 2

Part 5E Wages

Standard Specifications 1-07.9

Construction Manual 1-2.6C - Enforcement of Federal Prevailing Wage Provisions

Why do I care what wage workers make?

Section 1-07.9 of the *Standard Specifications* outlines prevailing wage responsibilities for the Contractor, subcontractor, lower-tier subcontractor or agents performing work under the contract. In addition, <u>contracts financed in whole or in part by federal funds</u> have additional federal contract provisions included in the contract documents.

After some abuses, federal wage rate laws were written. These include Davis Bacon and related acts. One goal was to prevent contractors from states where people make a lower wage from winning bids by bringing in out-of-state crews. The result is that workers are paid the usual and accustomed rate where the project will be constructed. This gives local contractors a fair chance to compete and ultimately provides local jobs.

By accepting federal dollars for your project and by adding in the required federal aid specifications, you are committed to both monitor and enforce the federal prevailing wage requirements.

How do I know what that rate is?

Look in your project manual. There will be two sets of wage rates for most projects. One is the State rate. One is the Federal rate. For each job classification, you need to determine which rate is the higher of the two. That is the prevailing rate you must enforce.

But the State rate and Federal rate aren't the same!

Right. You need to know both rates before you can determine which one is higher for each job description. You may want to prepare a worksheet showing what each job description you have already looked up should be paying. That way you don't have to look it up fresh every single time you check a payroll for compliance.

What if the union or prevailing wages change during my project?

The commitment your contractor makes it to pay either the State rate or the Federal rate – whichever is higher - 10 days before the project goes to ad. This wage will often be the union wage for a particular kind of work in your area. If the union wage changes during your contract, you aren't responsible to enforce the change.

What am I trying to accomplish?

You want to be sure that each individual working on the project is being paid at least the minimum prevailing wage. To that end you will check certified payrolls and conduct wage rate interviews.

You need to confirm that the contractor has met their requirements, too.

In order to comply with these requirements, the Prime Contractor, each subcontractor and each agent or lower-tier subcontractor.must:

- Submit weekly certified payrolls within 10 days.
- Post wage rate posters.
- Post the State and Federal wage rates.
- Allow interview of employees during working hours.

Lakeside Industries P. O. BOX 7016						PAYROLL	N -/C	m (3.8)	****	B I/C SR5		~	Page: 1 ERT. d: 18
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Payroll Form

Received - Turnwater

6116

OCT 2 9 2001

Project Engineer

U.S. DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

Form Approved Budget Bureau No. 44-81093

STATEMENT OF COMPLIANCE

Date: 24 OCT 2001

Certified payroll Number: 18
Job Number: 071051

- ! Julia Gauthier, Union Payroll Administrator, do hereby state:
- (1) That I pay or supervise the payment of persons employed by Lakeside Industries on the AIRDUSTRIAL I/C TO CAPITOL LAKE I/C SR5,

that during the payroll period commencing on the 14th day of OCT 2001 and ending the 20th day of OCT 2001 all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said Lakeside Industries from the full weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by eny person, other than permissible deductions as defined in Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948.63.Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. 276c), and described below:

Federal Withholding, FICA, Workers' Comp., Union Vacation & Dues, Voluntary Deductions and any Court Ordered Deductions.

- (2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.
- (3) That any apprentices employed in the above period are duly registered in a bona fide appprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.
- (4) That
 - (a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS
 - X In addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in Section 4(c) below.
 - (b) WHERE FRINGE BENEFITS ARE PAID IN CASH
 - Each Laborer or mechanic listed in the above referenced payroll has been paid as indicated on the payroll, an
 amount not less than the sum of the applicable basic hourly wage rate plus the amount of required fringe benefits
 as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTION	S
---------------	---

EXCEPTION (CRAFT)	EXPLANATION EXPLANATION
1	
MASHINGTON STATE BOT 6116/IM-0052(184) MASHINGTON, STATE DOT*	

Julia Gauthier, Union Payroll Admin
The willful falsification of any of the above statements may subject the
prosecution.

he contractor or subcontractor to civil or criminal

Payroll Form

Certified Payrolls - Checking Wage Rates

The wage rate side lists individual workers and shows their wages. Your commitment is to check all entries on the first payroll and 10% of entries thereafter*. What that normally means is that you spot check (once every payroll or two depending on the size of the work crews) after you have thoroughly checked the first payroll from the prime and each sub. If errors are found during any spot-check of the payrolls, a more complete check should occur until you are confident that the errors have been corrected.

See 1-2.6C(2) in the Construction Manual.

Payrolls are checked to ensure that the required information has been included and is correct. A complete payroll includes the following:

- Contract name or number
- Sequential payroll number
- Payroll period (i.e. week ending February 2, 2007)
- Name of the employer
- Name of employee
- Each employee's social security number and permanent address must appear on the first payroll on which their name appears, or on a separate list attached to the payroll
- Correct minimum wage rate for the worker's classification

*If a project runs more than one construction season, consider taking a look again in the spring of subsequent years or anytime the person signing the payrolls changes.

What are the most common errors?

- Paid the wrong rate in the right classification
- Paid in the wrong classification
- Reported the wrong number of hours on this project
- Paid the same as last week (which was not Fed Aid)
- Paid general labor at the landscape labor rate

What are the most common frauds?

- Underpaying non-English speaking workers
- Fraudulent certification
- Paying the right amount but getting a kick back

Protecting Personal Information

Certified payrolls include a wealth of personal information including home address and social security numbers. In the wrong hands, this is enough personal information to cause serious problems. Provide for the security of payrolls in job shacks and your offices. Protect this personal information it as if it were your own.

If your agency releases payrolls as part of a public disclosure request, cover the home address, social security number with a post-it before copying or ask your attorney for advice.

Checking for certification and signature

The other side of a certified payroll is where the contractor certifies that the wage paid is correct.

The certification must say four things:

- 1. That the payroll copy furnished is a true copy
- 2. That the payroll is correct and complete
- 3. That the wage rates contained therein are not less than those determined by the Secretary of Labor, and that the classification conforms with the work being performed.
- 4. That the appropriate Fringe Benefits due each employee have been paid in full. Look for an X in a or b in item 4.

This must be signed by a company representative. This should be signed by a permanent employee that actually understands what they are signing.

What happens when they don't send it to me?

Section 1-07.9(5) of the *Standard Specifications* says that "any or all payments may be withheld until compliance is achieved". You have a contractual basis to withhold payment for any prime and/or sub that isn't submitting payrolls.

You must write a letter to the Contractor giving 10 days notice that payment for items affected by missing payrolls will be withheld if certified payroll is not received. Then do it.

Which posters are required?

- FHWA 1495 & FHWA 1495 A Wage Rate Information
- FHWA 1022 Fraud Notice Poster
- OFCCP-1420 Equal Employment Opportunity is the Law
- WISHA P416-0881-000 Job Safety and Health Protection
- P242-191-909 Notice to Employees (L&I)
- F700-074-000 Your Rights as a Worker
- EMS 9874 Notice to Employees (Employment Security)

Remember to post the State and Federal wage rates, too.

Where are posters and wage rates displayed?

For projects with an office or storage trailer:

- A board outside the job shack (protect from weather)
- A bulletin board inside the job shack

Small projects with no office or trailer:

- On the outside of the outhouse (protect from weather)
- On a sandwich board in the back of the foreman's truck
- Anywhere that workers have full access to the information

No office or outhouse?

Discuss at your tool box meeting and document

What is a wage rate interview?

The purpose of employee interviews is to establish, with reasonable certainty, that the correct minimum prevailing wages are being paid. This means that the classifications are correct and that the workers in those classifications got the right pay.

Wage rate interviews accomplish four things:

- 1. May protect your agency from costly prevailing wage issues. Your agency is ultimately responsible for being sure that workers are paid the prevailing wage. Even after the project is over, wage rate issues may surface. If the contractor does not correct the problems, then your agency will pay the workers.
- 2. Provide a mechanism to spot errors.
- 3. Provide a way to spot wage fraud.
- 4. Educate workers about minimum prevailing wage requirements. Tell them where to find the posters and wage rate information. Most wage fraud is reported to L&I after the project is complete.

Federal-Aid Interstate Project **Employee Interview Report** Minimum Wage Compliance Survey Hourly wage maybe slightly different. July 29, 2002 Wage rate claimed by employee Wage rate recorded on Contractor's payroll Minimum wage rate prescribed by the contract wage determination schedule Include reference to supplemental reports, if any Remarks (4) Not certain of wage Date Main Street, First Ave. to Fifth Ave. 3/62 +205 1685 22 22 4 7 65 3/ 55 22 69 ල 62 Ξ. 3 Hourly Wage Rate 00/62 24 88 1967 Record (2) 05 27 05 27 18 x/J B Goode Construction 3 3 CANSINDULIA! Contract Title Stated (1) % 22.55 500€ Driving 4,000 gallon water truck STPUL-4301(001) Operating PR-1050 CMI Planer **Current Duties** Supervising Work Federal-Aid Number Employee Labor Description Project Engineer (1) Operator Teamster Washington State Department of Transportation Distribution: Good Construction Inc. Employee TA-1234 Keith Molyneux Contract Number DOT Form 424-003 EF Revised 12/96 Ken Hash andy Kemp 3ill Pierce nterviewer Contractor

Employee Interview Report

Who do I interview?

- Employees of the prime contractor (required)
- Employees of major (30% or more of the contract dollars) subcontractors (required)
- Anybody that says they are not paid correctly (required)
- Employees from any other subcontractor that is on the project more than 2 or 3 weeks (recommended)
- Employees of landscaping subcontractors or any other crew that includes non-English speaking members (recommended)

What if they won't tell me?

Your job is to ask the question. Just write down what they tell you, even if the answer is "don't know" or a general amount (about \$25 bucks). There are many reasons that they won't tell you.

- They don't understand why you are asking
- They are afraid that answering will cause trouble for them or cost them their job
- They genuinely don't remember
- They move around from job to job and don't know what they will be paid on this project
- They never talk to strangers about money

Four steps? To complete one form?

- Step 1 Ask the employee what they are paid
- Step 2 Enter the prevailing wage
- Step 3 Enter the amount from the certified payroll
- Step 4 Resolve any differences and note how you did.

How do I resolve problems?

All discrepancies found during an employee interview must be resolved. This means you need to ask the contractor about the difference and follow through until you understand what happened. If one phone call doesn't get things resolved, start writing letters. Document the steps you take, what you find and how the problem was ultimately resolved.

What if it never gets resolved?

It is expected that a satisfactory correction or explanation will be made within a reasonable amount of time. If this does not happen, tell the contractor that the matter might be referred to Labor & Industries for further action. Call your Region H&LP Engineer for advice and help.

Part 5F Change Orders

(Standard Specifications, Changes (1-04.4)

You have an executed contract with the prime contractor for your project. As plan errors, changes or problems are discovered, it will become necessary to modify that contract so that it continues to define and detail the work you expect your contractor to perform. The method used is the change order which, once properly executed, becomes a part of the contract documents. The change order must stand on its own, clearly and unambiguously defining a change to the original contract. It needs to be signed by the same level of authority that signed the original contract unless the authority to sign change orders has been designated (in writing) to others.

Why should I bother to write a change order?

- This is your legal way to pay the contractor for work not covered in the plans and specs.
- It settles issues as they come up so you may avoid some end-of-project claim situations.
- Any quantities of bid items included in a change order are not counted in the +/- 25% calculation.
- To satisfy auditors and protect the Federal funding.

When do I write a change order?

- Field adjustment. NO
- Design error. YES
- New situation not covered by plans and specs. YES
- Changing the materials requirements. YES (Unless the specs say "or approved equal".)
- Changing the method, spec or other key component of the work. YES
- When deleting work. YES (Remember to consider a <u>time</u> credit, too.)
- When prices are renegotiated because final quantities for an item below 75% or above 125% YES, if requested by contractor.
- When you accept out of spec material

What Do I Need To Say?

Keep it simple in the body of the change order. The text is basically like a special provision. Use existing bid items when the work is the same. Make new items when you need them. Be sure you include the following:

- State what you generally want them to do.
- Don't tell them what method and/or materials you want them to use, but do point to a specification you want it to meet. ("supply Crushed Surfacing Base Coarse meeting the requirements of 9-03.9(3)", for example)
- Include a plan sheet if you need to show detail. You may need to have it stamped.
- Include info on both measurement and payment.
- Talk about contract time on every change order, whether or not you will give them any days.
- If the change order settles a claim, a waiver must also be included.

What Units Should I Use?

Generally, these guidelines will work but your circumstances may make another choice better:

- Use a bid item if the work matches exactly.
- Use lump sum if you and the contractor agree on price and time before the work is done.
- Use lump sum if the work is already complete.
- Use force account if you documented the work on a force account sheet.
- Use force account if you and the contractor can't agree on price and time.
- Use unit prices for a new item if you anticipate needing the pay item again.

How Much Am I Supposed To Pay?

For owner-generated changes, the goal is to leave the contractor in the same position for profit, loss and time as before the change. That means be fair but don't be taken advantage of. The truth is that work added by change order often costs more than work that is competitively bid for many reasons including:

- May not come at the most convenient time for the contractor's operation.
- May change the productivity and efficiency of the changed work.

- May change the schedule, productivity, or efficiency of other work.
- May require extra traffic control, planning or supervision.
- May require rental or mobilization or equipment and materials.

Make An Independent Engineer's Estimate For Dollars And Time:

Independent is the key word here. Don't just OK the contractor's proposal. Ideally, you will already have worked up a written estimate before the contractor's price arrives. Then you can negotiate to get to fair.

Your estimate should explain in detail why you think the price is appropriate. This is usually an independent cost breakdown of labor, equipment & materials with appropriate markups. For some work, it can also be a comparison to similar work on this or other recent projects. At the end, it needs to be clear to everybody why you thought it was okay to pay this price and/or give this time. It should include these components:

- 1. Description of the change.
- 2. Explanation of why the change order is necessary?
- 3. Evolution of the change (did you consider other alternatives, consult others?)
- 4. How do you know the price is appropriate?
- 5. Why did you add, delete, or not change time?
- 6. Summary how does the project benefit from this change?

Put Documentation Of A "Verbal" In The File:

If you are doing the work before the change order is executed, <u>you need</u> to document that you told the contractor to go ahead. Be sure it includes whatever you and the contractor have already agreed about payment, materials, equipment or time – even if your entire price/time aren't firm. If the agreement is to document on force account and write a lump sum change order when the work is done, say so. This can be a separate note to the file, a copy of an e-mail or a note in the IDR.

Prompt Pay Law

New state law requires that you pay the contractor promptly – within 30 days – which for us means the next estimate payment. If there are reasons you won't be paying them then, you need to let them know by letter or e-mail at least eight days before they won't be getting paid. This is to give them time to make the situation better if they are part of the hold up.

Can't Agree On All Change Order Issues?

Sometimes you and the contractor can't reach agreement on part or all of a change order issue. When that happens you need to pay something as follows:

- If you are in agreement on part of the issues, include the dollars and time you agree on and state clearly what the change order does not resolve. Keep negotiating.
- Process a change order unilaterally (without the contractor's signature) and include the dollars and time you think are appropriate. Note that this is a unilateral payment, not an agreed amount. Keep negotiating.

Don't Pay For Any New Items Until The Change Order Is Executed:

You don't have any legal authority to pay until you have an executed change order.

What Is In A Complete Change Order File?

- 1. A copy of the executed change order.
- 2. A memo to file or IDR that explains why you need a change order.
- 3. Any correspondence or e-mails from the contractor.
- 4. A documented "verbal" approval.
- 5. An independent cost and time analysis.

This is intended to help with the more common situations. It doesn't apply to CRIPS, schedule recovery, termination, scope change, changes in COA DBE work, unilateral, complex claims or other unusual change orders. For these more complex situations, see the *Construction Manual* and/or call your Region H&LP Engineer for help.

Washington State Department of Transportation	Change Order
Contract Number	Federal Aid Number
Contract Title	
Change Order Number	
Prime Contractor	
Ordered by Engineer under the terms of Section 1-	04.4 of the Standard Specifications
☐ Change proposed by Contractor	
Endorsed By	Surety Consent
Contractor	Attorney on Fact
Date	Date
Original Contract Amount Current Contract Amount Estimated Net Change This Order Estimated Contract Total After Change	
Approval Recommended Approved	Approved
Project Engineer	Approving Authority per C.A. Agreement
Date	Date Other Approval When Required
Approval Recommended Approved	ошел дърговат вител пединей
Ву	Signature Date
Date	Representing

LAG Appendix 52.107 Page 1 of 2

Construction and Post-Construction Appendix 52.107 Change Order

Change Order Checklist

Qu	estion	Yes	No	N/A
1.	Does the change order alter the termini, character, or scope of the work?		\times	
	If yes, you must have H & LP approval to be eligible for federal funds.			 >
	If yes, you must submit a revised Page 1 of the prospectus.			X
2.	Is the Change Order over \$7,500.00 and outside the scope of work?		><	
	If yes, the change cannot be a change order and must be an independent work.	-	ļ	×
3.	Does the Change Order detail all items involved with the change?	\times		
4.	Does the Change Order include an adjustment in working days?		\times	
	If yes, the time extension must be stated in the Change Order.			<u>></u>
	If yes, an independent engineer's estimate of time must be included to document the extension.			$ \times$
	If no, that must be stated in the Change Order.	\times		
5.	Does the Change Order alter the DBE Condition of Award?	1	iz.	
	If yes, you must obtain concurrence form H&LP.			5<
	If yes, you must obtain the DBE's signature on the Change Order.			\geq
6.	Does the Change Order involve a material substitution?		<u>بر</u>	
	If yes, you must determine if a material credit is appropriate.			<u>></u>
7.	If Change Order work started prior to it's execution, prior verbal approval by the Approving Authority must be granted and documented.	X		
8.	Has the Change Order been signed by the contractor?	X		
10.	Has the Change Order been executed by the Approving Authority?	X		
	If you are a "non CA Agency", you must have the acting CA Authority's approval.			X
11.	Has an independent engineer's estimate justifying the costs and time extensions been completed and documented?	X		
12.	Has a detailed memo outlining the chronology of events, basis of need, costs and working days been prepared and placed in the file accompanying the Change Order?	X		

Local Agency Guidelines M 36-63 October 2006

52-15

LAG Appendix 52.107 Page 2 of 2

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION CHANGE ORDER

5/8/2003 PAGE 2 OF 4

CONTRACT NO: TA2433

CHANGE ORDER # 7

General

You are ordered to perform the following described work upon receipt of an approved copy of the change order.

Description of Work

The contractor shall install Roof Drains as detailed on sheet 4 of 4.

Measurement

Measurement for Roof Drains shall be by each.

Payment

Payment for Roof Drains shall be by each.

Working Days

Working days are not affected by this change order.

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER

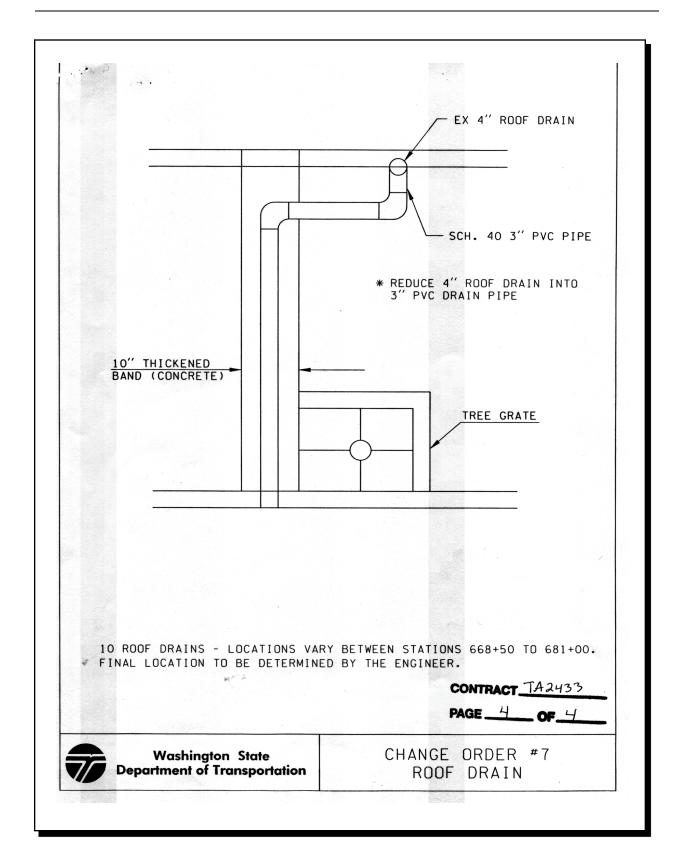
5/8/2003 PAGE 3 OF_

\$0.00

CONT	HACT NO:		CHANGE ORDER NO:						
ITEM NO	GROUP NO	ITEM NO	UNIT MEASURE			EST AMT CHANGE			
151	3	Roof Drains	EACH	\$600	10	\$6,000.00			

TOTAL \$6,000.00

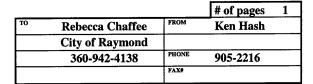
Change Order

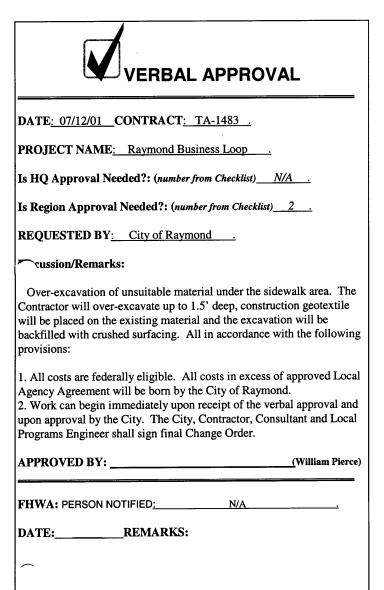


Change Order

JUSTIFICATION FOR ROOF DRAINS INSTALL ROOF DRAINS WITHIN BRICK PAVER CONCRETE BORDERS. THIS WORK CONSIST **GRAND** OF WIDENING THE PRIME TOTAL FOR **SUB TOTAL BORDER FROM 6** MARKUP IS **LABOR FOREMAN OPERATOR** LABORER FOR LABOR **INCHES TO 10 INCHES** INCLUDING 29% **AND RUNNING 3 INCH MARKUPS** SCHEDULE 40 PIPE THRU THE BORDER AND CURB TO THE STREET. **TOTAL HOUR** 10 20 10 \$37.00 \$40.00 \$40.00 **HOURLY RATE** \$400.00 \$1,540.00 129.00% \$1,986.60 **COLUMN TOTAL** \$400.00 \$740.00 ADDITIONAL MATERIAL **GRAND** TOTAL FOR PRIME **COST INCLUDING** MATERIAL MARKUP OF **MATERIALS CONCRETE FOR** COST INCLUDING 21% **BORDER AND 3 INCH MARKUPS SCHEDULE 40 PIPE** \$200.00 129.00% \$258.00 TOTAL **BEFORE** SUB \$2,244.60 MARKUP OF 12% 112.00% GRAND 2,513.95 TOTAL TOTAL ROOF **DRAINS** 4.00 INSTALLED PER SHIFT. **JUSTIFIED** COST PER 628.49 EACH ROOF DRAIN

Change Order





Change Order Checklist:

- A. HQ Signs Change Order
- A change in the contract documents beyond the termini, character, scope of the original contract.
- ____
- **B.** Region Signs Change
- 2. Modified CA Project.
- Cut on border.

Verbal Approval

Minor Changes (Standard Specifications 1-04.4(1) The Easier Change Order

Credits, debits, non-structural, changes in working days of 10 or less, and no cost changes may all be processed under the minor change method. You are still required to have supporting documentation including an independent estimate and working day calculation in your files as backup. Use the minor changes item over and over in your project whenever all of the following are true:

- Your project includes the bid item, "Minor Changes"
- The amount of the individual change is \$5,000 or less
- Payment can be made as a lump sum item
- You use the Minor Changes form (form 421-005A)
- The change is signed by the contractor or a verbal is documented
- A copy is provided to the contractor

Note must be signed by the same person as any other change order

Part 5G Project Payment/Source Documents

Prompt Pay Law

New state law requires that you pay the contractor promptly – within 30 days – which for us means the next estimate payment. If there are reasons you won't be paying them then, you need to let them know by letter or e-mail <u>at least</u> eight days before they won't be getting paid. This is to give them time to make the situation better if they are part of the hold up.

Source Documents

In some way, you need to create documents in the field that will ultimately result in payment. Measurements and calculations of contract quantities need to be complete, accurate and detailed enough to sustain audit.

- Common types of documentation:
- Item quantity tickets
- Field note records
- Field note records for drainage
- Force account
- Lump sum

Whichever type you use, the message is the same - PAY THIS AMOUNT BECAUSE... I measured it..., I counted it... I calculated it... I looked at the lump sum breakdown...

Tickets –

Either on the delivery ticket itself or a cover sheet for today's tickets, you need to show which material (BI #), where it went (station, street or landmark), and who received it (initials). Usually daily tickets are bundled together and a total is run.

Some agencies also use WSDOT tickets to document anything they can count or measure. The advantage is that you and the contractor agree on the quantity and have identical records.

If the ticket comes from a commercial source, be sure it includes the following:

- Contract number or project name
- Date
- Contract Unit bid item number or name
- Initials of person accepting the item on the jobsite
- Unit of Measure
- Identification of Hauling vehicle
- Record of the gross, tare and net weights. In the case of a batch plant with direct reading scales, or if the unit of measure is cubic yard or hour, only the net weight need be recorded.

77	Washington State Department of Transportation
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Item Quantity Ticket

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RECEIVED BY		WEIGHED BY	8
CHECK ONE		TRUCK NUMBE	3
TONNES +	HOURS	3	2
KG L	ITERS	GROSS	16,850
### M3	ACH	TARE	7,550
OTHER UNIT OF MEASURE		NET	9,300

	ITEM IDENT	IFICATION	
ITEM NO.		CONTRACT NO.	
CONTRACTOR	CONTRACT	4711	
SUBCONTRACTOR		RUCTION CO	
SOBCONTRACTOR	ITEM NO. 36		
ITEM DESCRIPTION	GRAVEL BA	.CKFILL	
	FOR DRAINS	8	
GRAVEL BASE	BALLAST	CRUSHED BASE	SURFACING TOF

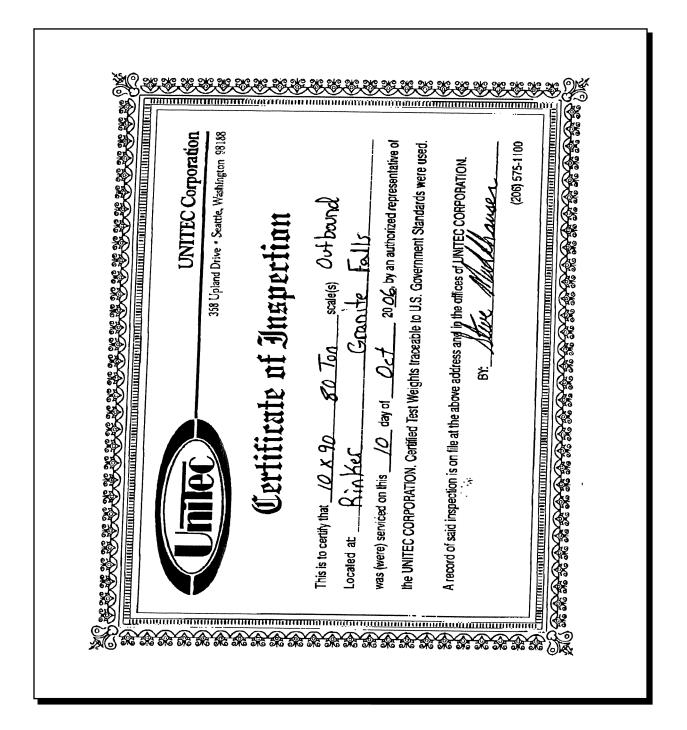
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Is the scale accurate? Get Scale certs

Weighing (Standard Specifications 1-09.2(5))

Platform scales must be certified accurate at the beginning of use and every six months during the life of the project. This certification must be performed by a scale manufacturer or by Washington State Department of Agriculture. (*Construction Manual* 10-2.2C(1).



Field Note Records (Construction Manual 10-1.2)

These can be used to document payment amounts for nearly anything. They should be neat, clear, uncrowded, and in sufficient detail to be easily understood. The field note includes the following:

- 1. WHAT (bid item # and name)
- 2. WHERE (station 14+66, Wall 7 backfill, N. end of Oak Street, etc). If you have multiple groups for this work show the group number or name.
- 3. WHEN (date or range of dates when work was done)
- 4. HOW MUCH (what quantity to pay show your work if calculated)
- 5. WHY (how do you know this is the right amount)
- 6. WHO (sign as inspector, initial as checker of record, initial as person who transferred data to the ledger)

NEVER ERASE OR USE WHITE OUT, Instead, draw a line through the error and include the initials of the person making the correction

Check for discrepancies between field note quantities and plan quantities before you pay the estimate

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Field Note Record

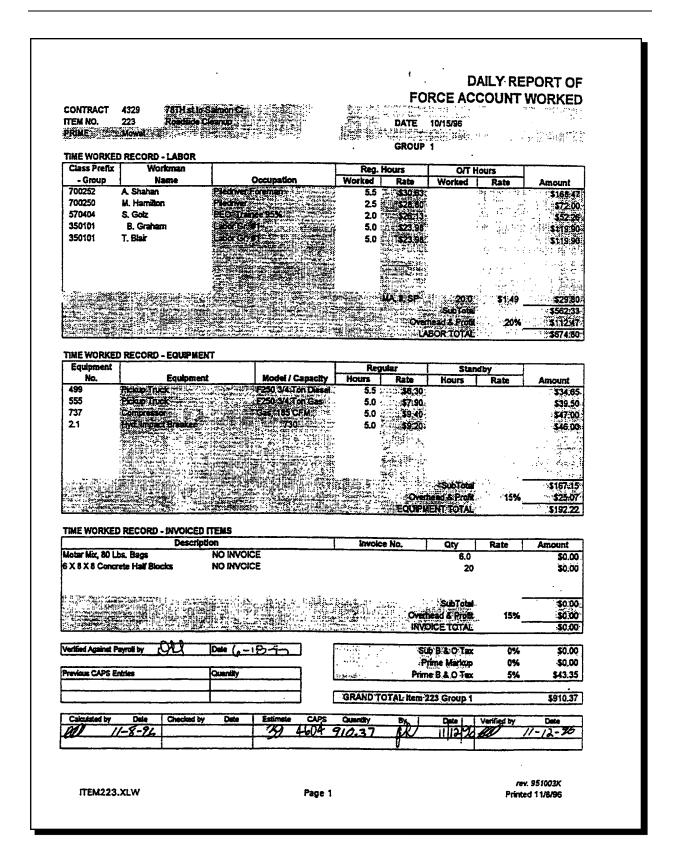
FORCE ACCOUNT

The purpose of force account is to fully reimburse the Contractor for costs incurred on specific work. Use for the following:

- Bid items that are shown as force account.
- Changes that you agree you will be paying.

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Daily Report of Force Account Worked



Daily Report of Force Account Worked

Force account sheets in the field -

Use these when you and the contractor agree that the work is compensable – either an existing bid item or if you are tracking added work. Give the contractor a copy in the field.

While you have the authority to direct every aspect of force account work, in most cases, it is best that we allow the Contractor to propose the method and approach to the work. Our most effective role would be to concur or approve of the Contractor's proposal or to suggest modifications to the plan. Before any work is performed by the Contractor on force account basis, the inspectors should review and agree with the Contractor on the use of labor (including overtime labor), equipment, and materials. Since the purpose of force account is to fully reimburse the Contractor for costs incurred on the work.

Fill them out on the day the work is done – don't trust your memory. Be sure you have included enough detail that the office staff can complete them and get them paid.

Change order sheets must be signed by both the inspector and the contractor.

Labor

Force account payments are not usually allowed for general supervisory work. However a foreman or, in some cases, a dedicated superintendent devoting full time to the force account work is eligible for payment on the force account. Ask yourself if they were really present and added value to the force account work.

Equipment

Include enough detail about the equipment that is used so the office staff can complete and process the force account sheet in a timely manner. Remember to include "extras" that were used - like buckets or thumbs.

Materials

Include the basic list of materials that you observed were used. Document daily, unless you and the Contractor agree that some other arrangement will work. Note this agreement on the force account sheet.

The specifications allow the Engineer to require competitive quotations, if this is done before the work is started and sufficient time is available.

Mobilization

Mobilization and demobilization are reimbursable expenses for assembling equipment, materials, supplies, and tools.

CAUTION: DOCUMENTING DISPUTED WORK

Track disputed work. The contractor may prevail and need to be paid after all. You will need to have accurate records of the work. If you aren't sure

that you want to pay for it, don't use a force account sheet. Far better to use a blank sheet of paper that you date or use Report of Protested Work Form 422-007. If you do use a force account sheet, write DOCUMENTING DISPUTED WORK– DO NOT PAY or something similar in large letters then initial your note but don't sign the force account sheet. Signing a force account sheet is a commitment to pay. Don't sign it unless you mean it.

Force account sheets in the office

Markups

Be sure you are applying the right markups (see *Standard Specifications* 1-09.6).

Labor — 29 percent

Equipment, Materials, Services — 21 percent

Contractor Markup for Subcontractor's Work:

Up to \$25,000 12%

\$25,000 up to \$100,000 10%

\$100,000 and greater 7%

The amount and markup rates must be calculated separately for each subcontractor on each force account item.

Paying for Equipment

There are three methods of acquiring equipment for use on a force account:

- "Owned" means that the Contractor controls and operates the equipment. Long term lease arrangement would be the same as ownership. Owned equipment is priced according to Blue Book. For multiple day work, you pay whichever works out to less the daily, weekly or monthly rate.
- "Rented to Operate" means that the Contractor has obtained a piece of equipment through a short-term rental and will operate the equipment with its own employees. Reimburse rented to operate equipment according to the invoice from the rental agency.
- "Rented-Operated" means that the Contractor has obtained a service from an individual or a company to provide a piece of equipment with an operator. An operated rental is not paid as equipment, but rather as a Service. Reimburse the invoice cost.

Repair of damage is considered a risk of providing equipment. The cost of this risk is assumed to be in the markup for overhead and profit. If a Damage Claim Waiver appears on a rental invoice, the cost for this waiver should be removed before payment is calculated. The Engineer may require competitive bids for equipment rentals.

Paying for Materials

The Contractor adds prices to the list and attaches invoices to support the prices. If the Contractor does not have an invoice, as in the case of stockpiles or some warehouse stock, then an affidavit will suffice. When you review the affidavit you can either accept the price or declare it unreasonable and substitute another price you can substantiate as reasonable.

Paying for Services

Services billed by invoice can be paid by invoice if that is the typical method. Billing by invoice does not excuse the service provider from the requirements of the prevailing wage laws. However, the force account payment system will not be used to enforce contract wage or other requirements.

The markup for services depends on the nature of the firm's activities on the project. If the firm is clearly an uninvolved supplier, then the service markup will apply.

If the firm is acting as a subcontractor, then the markup will be made under the provisions for subcontractors, with the underlying overhead and profit assumed to be embedded in the invoice.

Lump Sum Breakdown (Schedule of Payment) –

When you have a lump sum pay item, you need a method to make payment if only a portion of the work is complete. To make this a fair process, the contractor submits a "lump sum breakdown" or "schedule of payment". This shows what percentage of the labor, equipment and material costs the contractor will expend for various components of the work. It must include the basis on which any quantities used for progress estimate payments were calculated.

Example: Assume that a \$10,000 lump sum bid item includes four distinct activities. If you have done 50% of Activity A, 40% of B, 10% of C and 0% of D, how will you decide how much to pay?

What if you know that the contractor has weighted the activities this way - Activity A is 10% of the whole, B is 20%, C is 50% and D is 20%. Now you have enough information to calculate a fair payment as follows:

Activity A - 50 % complete, 10% of whole bid item

 $50\% \times 10\% \text{ or } .5 \times .1 = .05 \times \$10,000 \text{ or } \$500$

Activity B -40% complete, 20% of whole bid item

$$40\% \times 20\%$$
 or $.4 \times .2 = .08 \times \$10,000$ or $\$800$
Activity C -10% complete, 50% of whole bid item $10\% \times 50\%$ or $.1 \times .5 = 05 \times \$10,000$ or $\$500$
Activity D -0% complete, 20% of whole bid item

 $0\% \times 20\% \text{ or } 0.0 \times .2 = 0 \times \$10,000 \text{ or } \$0$

Dual Custody of Pay Records

All pay records should be reviewed and initialed by a 2nd person. When they are entered into a ledger, and that entry should also be reviewed and initialed.

Progress Payment Deferral (Construction Manual 1-3.1B(9))

Documents that can potentially cause delay on all or part of the Monthly Progress Payments to the contractor are:

- Statement of Intent to Pay Prevailing Wages (Prime or Subcontractors)
- Initial Progress Schedule
- Manufacturer's Certificate of Compliance *
- Monthly Employment Utilizations Report (820-010)
- Others as detailed in your project Special Provisions.

*"Manufacturer's Certificate of Compliance" is unique in that this is a situation, specified as part of the contract, where the Contractor may assume the risk of no certificate in writing and end up never being paid for the related work if they don't produce the certificate. See the *Standard Specifications* 1-06.3.

Withholding payments for work the Contractor has performed and completed should not be done casually. There must be clear contract language supporting the action.

Before delaying or deferring payment, you should be able to demonstrate:

- Specifically what was not in accordance with the contract.
- The amount withheld is commensurate with the amount of work. Missing paperwork doesn't mean you can withhold payment for labor, equipment and materials, too. If you allowed them to do the work with missing documentation, you must pay them in most cases.
- Notify the Contractor in writing in a timely manner (within eight days per prompt pay law).

All deferred items must be properly addressed in the monthly progress estimate. Show the deferred quantity and note "payment deferred" or similar entry. When you pay it next time note "payment undeferred".

Part 5H Traffic Control

Records of Construction Signing and Accidents (Construction Manual 1-2.3E) Traffic Control Diary and Log (Standard Specifications 1-10.2(1)B)

Before work begins:

- 1. Your contract plans show a method of handling traffic control through your project. The Contractor must either adopt these specific traffic control plan or plans (in writing) and/or submit their own for approval. Most contractors bring this to the precon. You must have this in hand before on-site work begins.
- 2. The contractor must submit a letter designating after hours contact personnel and a Traffic Control Supervisor.

During the project:

Keep detailed records of signing and delineation:

- Be sure that construction signing in place matches the approved traffic control plan. If minor field changes are made, be sure they are documented. Significant, lasting changes should be reflected in a revised traffic control plan submitted by the contractor and approved by your agency.
- Turn on your date time stamp and take lots of pictures. A picture is worth a thousand words if there is an accident. At a minimum, photograph traffic control at the beginning and end of your work day and/or anytime the set up changes. More often is better protection for your agency.
- Be aware of any accident that occurs within the project area even after hours. Document site conditions and the status of signing and other traffic control measures.
- The contractor's Traffic Control Supervisor should complete a daily traffic control report and submit it to you. WSDOT forms 421-040A and 421-040B are commonly used for this task. Included in the daily report are such items as:
 - 1. When traffic control devices are installed and removed.
 - 2. Location and condition of signs and traffic control devices and the time of observation.
 - 3. Revisions to the traffic control plan.
 - 4. Lighting utilized at night.
 - 5. Observation of traffic conditions.
 - 6. Any accidents within the project limits